

## ABSTRACT

A digital baseband (DBB) radio frequency (RF) receiver used for receiving and processing a wireless communication signal. The DBB RF receiver includes a demodulator, an analog to digital converter (ADC) and a digital cross-talk compensation module. The demodulator outputs analog real and imaginary signal components on real and imaginary signal paths, respectively, in response to receiving the communication signal. The ADC receives the analog real and imaginary signal components and outputs respective digital real and imaginary signal components. The digital cross-talk compensation module receives the digital real and imaginary signal components, estimates the cross-talk interference caused by each of the signal components, and outputs digital real and imaginary cross-talk compensated signal components.